



# Austin Richey

Johnson Space Center

GHG Corporation

CX4-OSO

April 13<sup>th</sup>, 2017

New Albany High School



# Outline



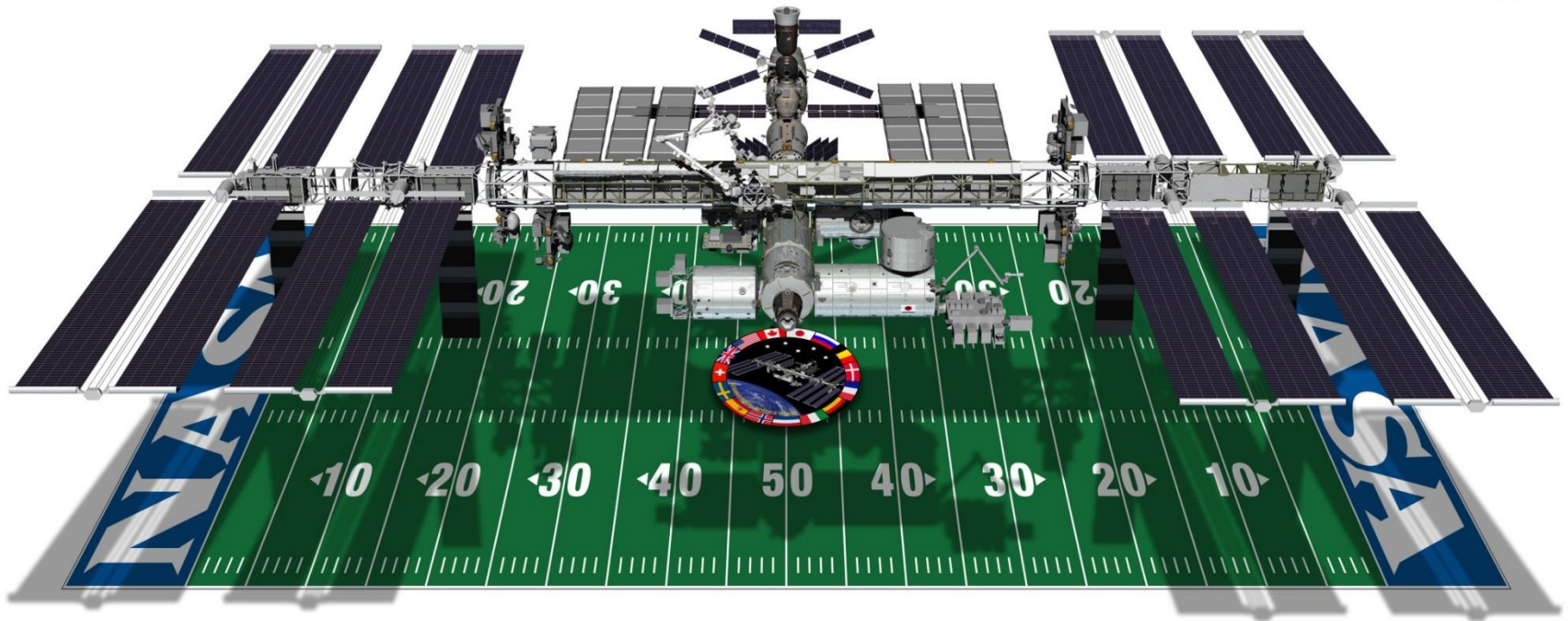
- What I do today
  - What is OSO?
- My Path
  - NAHS
  - MSU
  - Co-ops/Internships
  - Soft skill development & useful hobbies



# The International Space Station (ISS)



National Aeronautics and Space Administration



[www.nasa.gov](http://www.nasa.gov)



# My Day Job



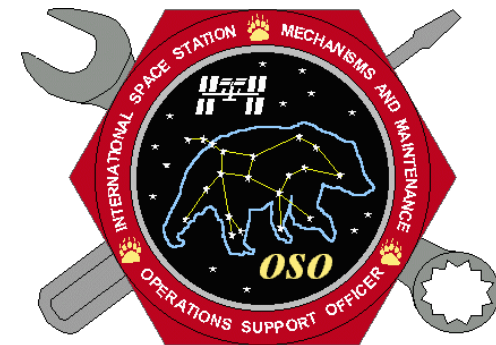
## In-Flight Maintenance



# Operations Support Officer



- Leads core systems US maintenance inside the ISS
- Supports non-core system maintenance
- Manages motorized mechanisms
  - CBM (modules, HTV, Dragon, COTS)
  - CAS (AMS, US external payloads and cargo)
- Manages structural sensors
  - Structural Dynamic Measurement System (SDMS)







OUT  
DOWN NET  
DOWN PET (0.0V)  
DOWN SLEEP

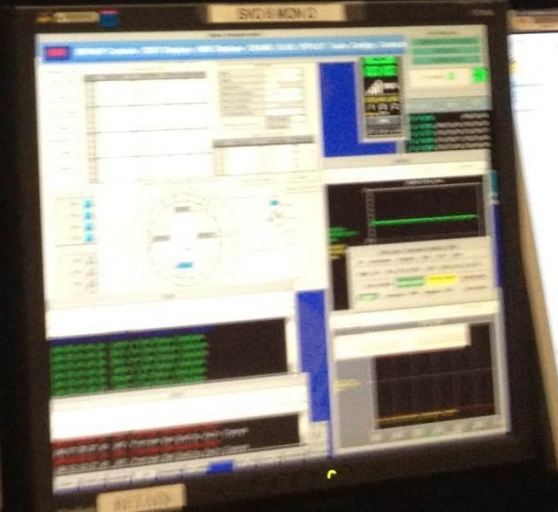
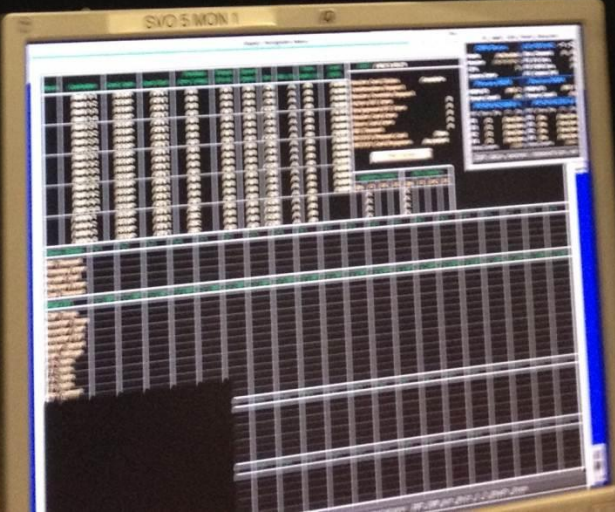
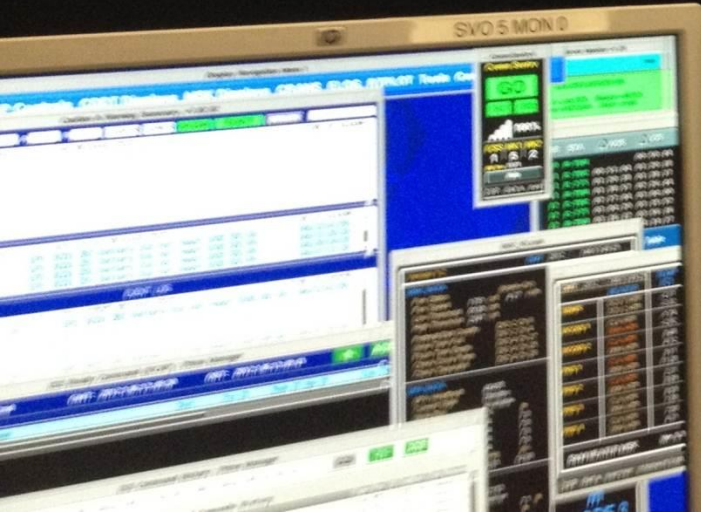
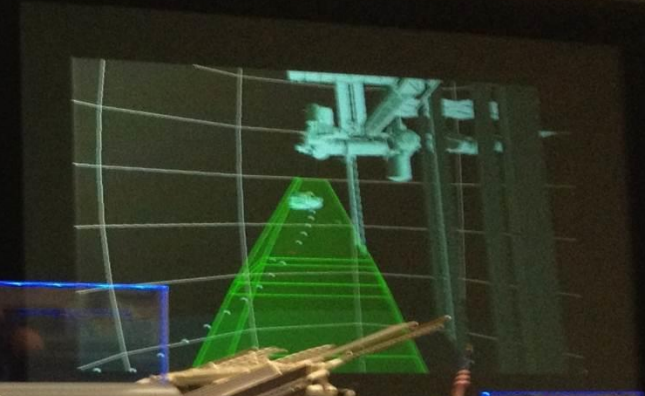
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001 00 04 24  
05 30 20  
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Mission Control Center  
707-700-7000



OSO





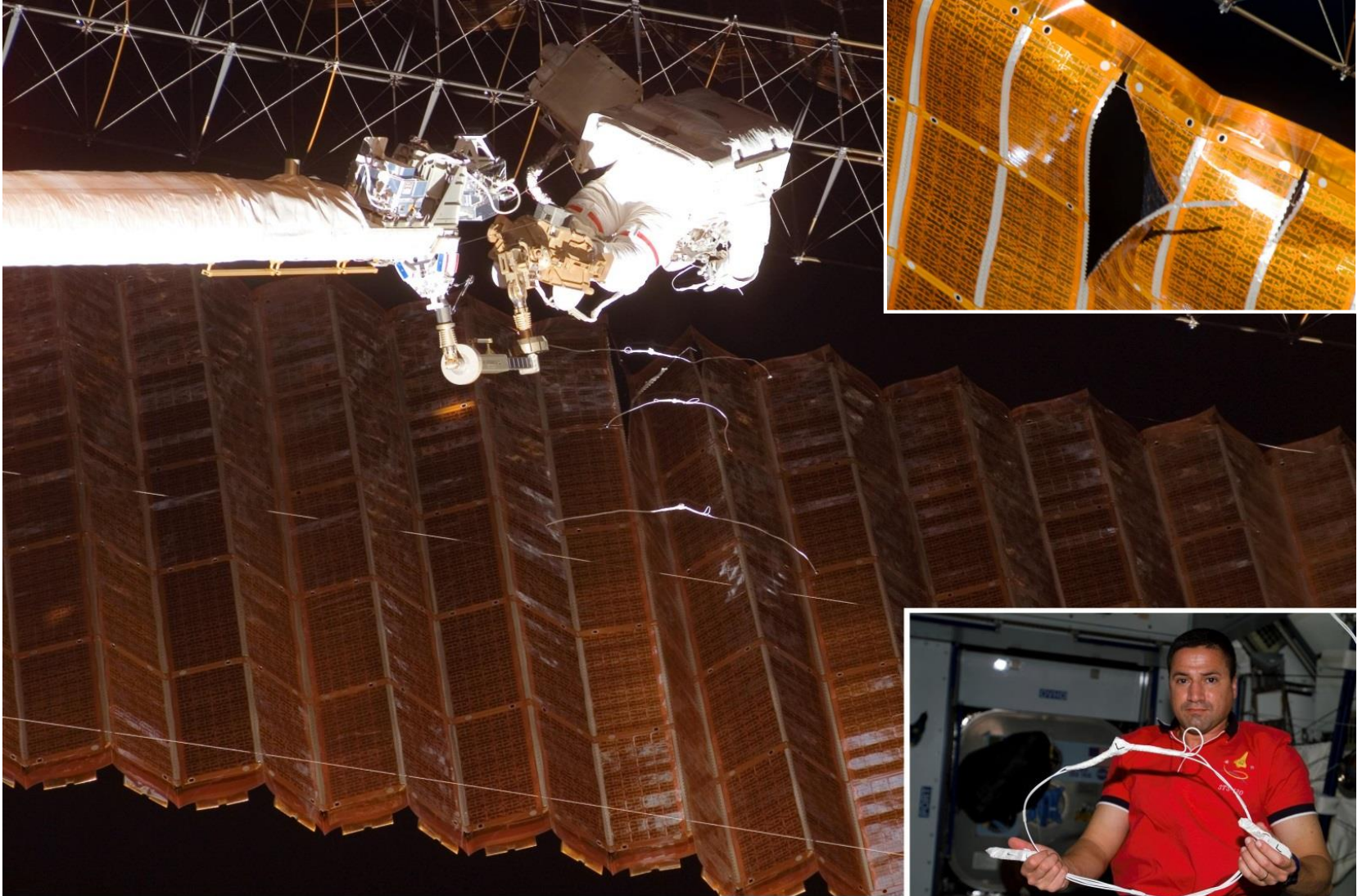


# Space Vehicle Maintenance





# ISS "Cuff Links"



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ISS016E009195

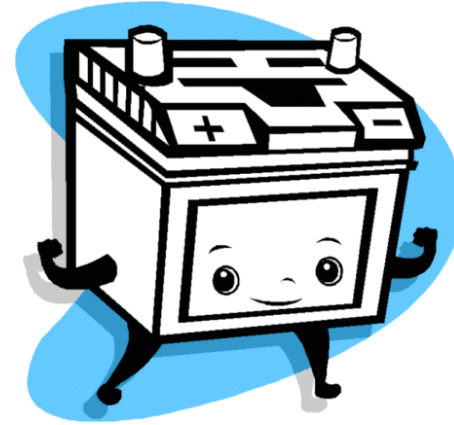


# Maintenance Types

- Preventive



- Corrective



- Contingency

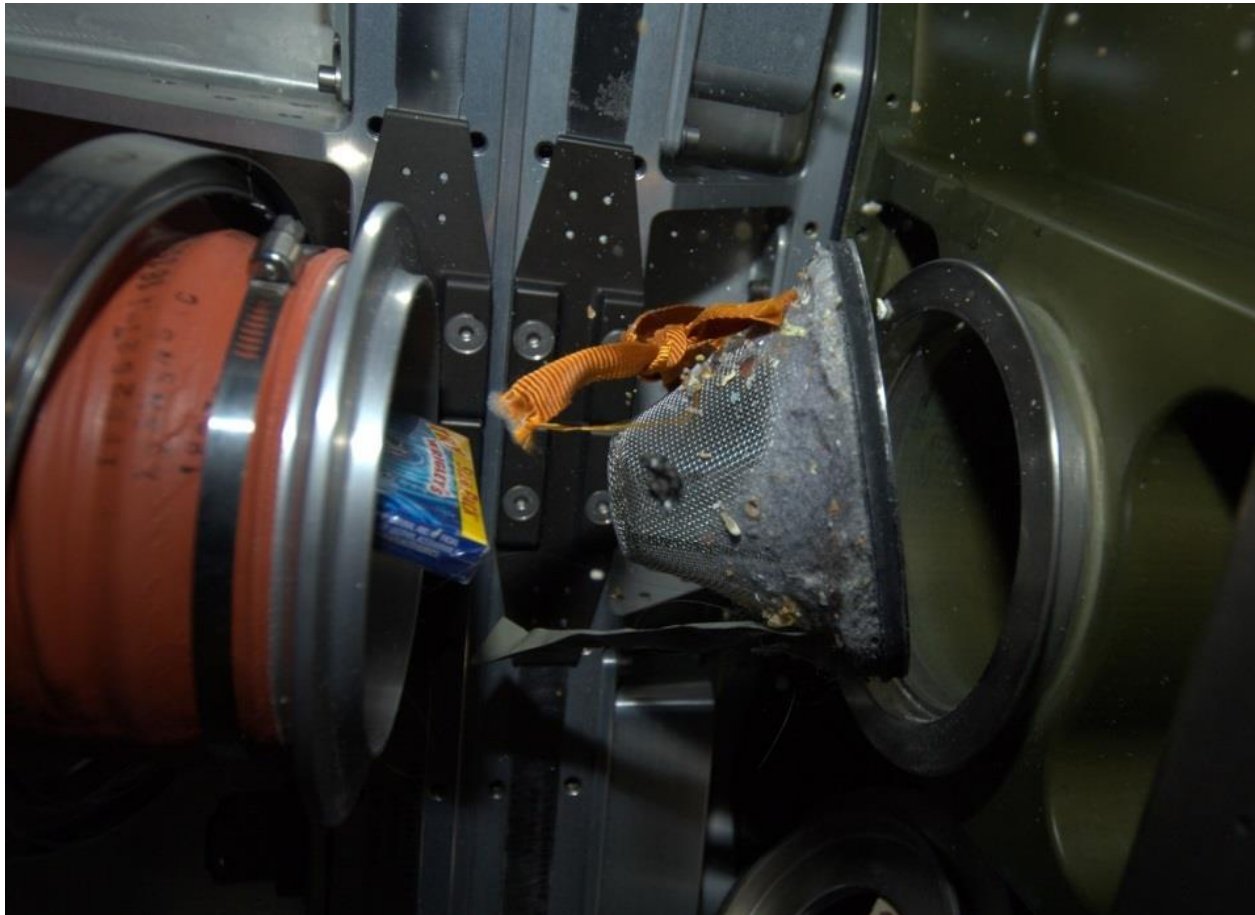




# Preventive: ECLSS



## Screen Assembly Cleaning





# Corrective: More ECLSS



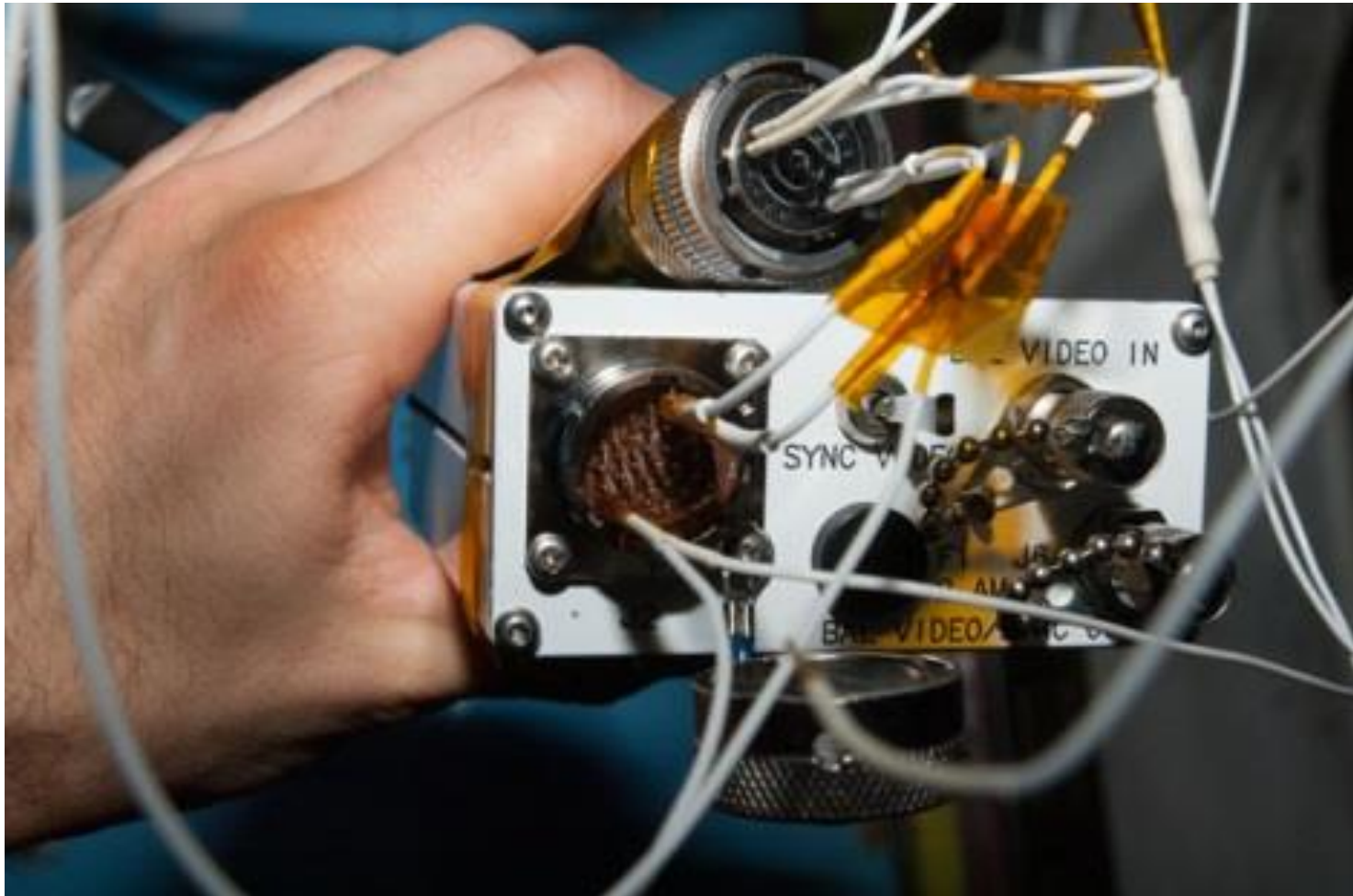




# Contingency: Diagnostic Troubleshooting



## Video System Troubleshooting

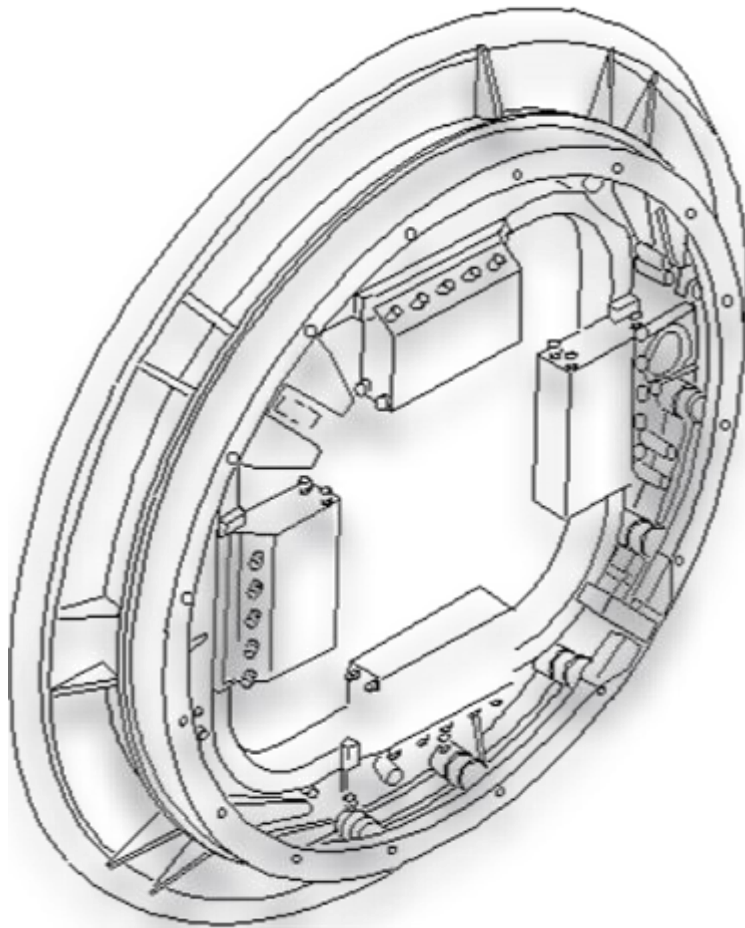




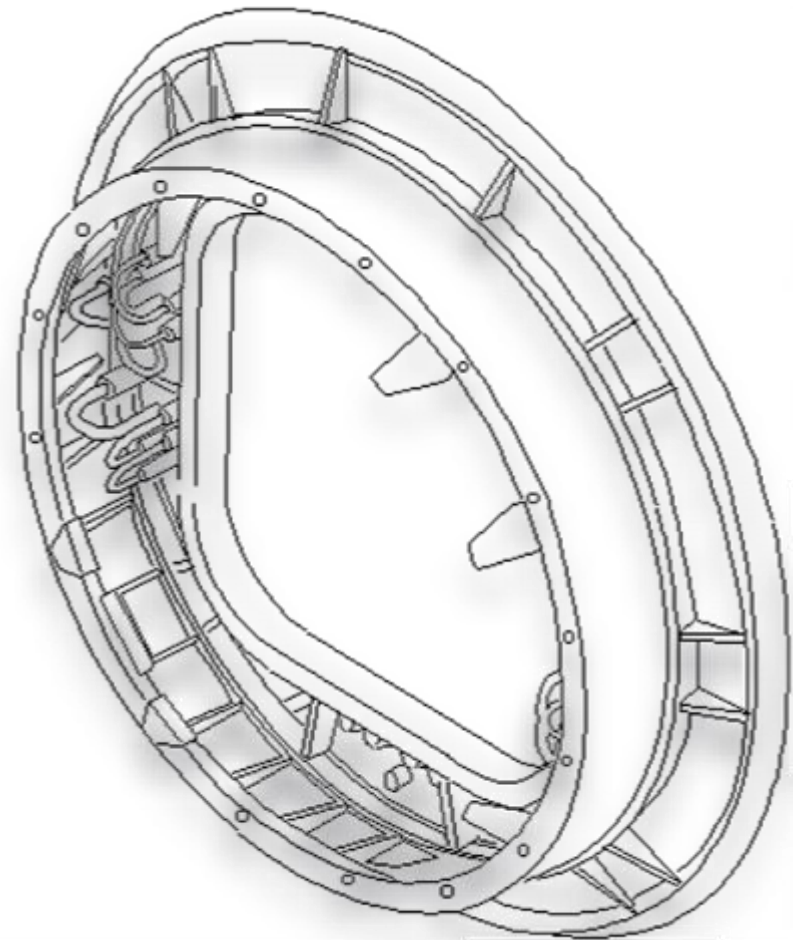
# Contingency: Creative Ways to Rewire



# Common Berthing Mechanism



**Active CBM**



**Passive CBM**



